

19-7798



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D206-642-451
Job Sheet 201997



Part No: D206-642-451

Job Qty: 1 pcs

Part Name: Replacement Skidtube, High Gear with Run-on Landing Wearplates Fits LH or RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/17/19

Job Tracking No:

Due Date: 11/7/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG D4361-043 REV A SHEETS 1,3,4, IIN-D206-642 REV Q SHEETS 31-32 IPP REV:A NEW ISSUE 13-06-13 JLM VERIFIED BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
110	Skidtubes - 1	1 pcs		11/7/19	0.00	3.70	Skidtubes - 1			
							Skidtubes - 2			
							Skidtubes - 3			
							Skidtubes - 4			
							Skidtubes - 5			
							Skidtubes - 6			
							Skidtubes - 7			
115	QC 5	1 pcs		11/7/19	0.00	0.00	QC 5 - 10			
							QC 5 - 12			
							QC 5 - 17			
							QC 5 - 18			
							QC 5 - 19			
							QC 5 - 22			
							QC 5 - 24			
							QC 5 - 3			
							QC 5 - 43			
							QC 5 - 49			
							QC 5 - 51			
							QC 5 - 58			
							QC 5 - 68			
							QC 5 - 9			
							QC 5 - 50			
							QC 5 - 30			
							QC 5 - 40			
							QC 5 - 61			
							QC 5 - 81			
							116	QC 10		
QC 10 - 18										
QC 10 - 24										
QC 10 - 43										



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Container No: S228460



Part: D206-642-451

Job No: 201997

Serial No/Batch: S228460

Revision:

Inspector:

Exp Date:

Instructions: FAA STC SA00475SE 18/10/17, TC STC SH98-

DAS
68
9-89

OCT 31 2019

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P.T.O.

120	Handfinish - 1-1 Chemical-B4B	1 pcs	11/7/19	0.00 0.74	QC 10 - 50	
					QC 10 - 58	
					QC 10 - 9	
					QC 10 - 68	
					Handfinish - 1 - 1 - B4B	OCT 3 1 2019 68
					Handfinish - 1 - 2 - B4B	9-89
					Handfinish - 1 - 3 - B4B	
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
130	QC 7	1 pcs	11/7/19	0.00 0.00	QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 60	
					QC 7 - 9	

					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	
					QC 7 - 24	
					QC 7 - 43	
					QC 7 - 61	
					QC 7 - 81	
					QC 7 - 76	
					QC 7 - 79	
140	Skidtubes - 2 - B4B	1 pcs	11/7/19	0.00 3.70	Skidtubes - 1 - B4B	
					Skidtubes - 2 - B4B	
					Skidtubes - 3 - B4B	
					Skidtubes - 4 - B4B	TF
					Skidtubes - 5 - B4B	
					Skidtubes - 6 - B4B	
					Skidtubes - 7 - B4B	
150	QC 5	1 pcs	11/7/19	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	BE
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
					QC 5 - 61	
					QC 5 - 81	
160	Skidtubes - 3 - B4B	1 pcs	11/7/19	0.00 3.70	Skidtubes - 1 - B4B	
					Skidtubes - 2 - B4B	
					Skidtubes - 3 - B4B	
					Skidtubes - 4 - B4B	TF
					Skidtubes - 5 - B4B	BE
					Skidtubes - 6 - B4B	
					Skidtubes - 7 - B4B	
180	QC 10	1 pcs	11/7/19	0.00 0.00	QC 10 - 10	
					QC 10 - 18	
					QC 10 - 24	
					QC 10 - 43	
					QC 10 - 50	
					QC 10 - 58	
					QC 10 - 9	
					QC 10 - 68	
190	QC 5	1 pcs	11/7/19	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					Plex 10/17/19 1:18 PM Dart.lajeunesse.marie	

					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	DAS NOV 08 2019 68
					QC 5 - 9	9-89
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
					QC 5 - 61	
					QC 5 - 81	
200	Handfinish - 2-1 Pressure- B4B	1 pcs	11/7/19	0.00 0.50	Handfinish - 2 - 1 - B4B	BEB 19-11-09
					Handfinish - 2 - 2 - B4B	
					Handfinish - 2 - 3 - B4B	
					Handfinish - 2 - 4 - B4B	
210	Powdercoat - 1 White GI(A)- B4B	1 pcs	11/7/19	0.00 0.22	Powdercoat - 1 - B4B	
					Powdercoat - 2 - B4B	
					Powdercoat - 3 - B4B	BEB 19-11-11
					Powdercoat - 4 - B4B	
220	QC 3	1 pcs	11/7/19	0.00 0.00	QC 3 - 10	
					QC 3 - 13	
					QC 3 - 15	XL 19-11-11
					QC 3 - 17	
					QC 3 - 18	
					QC 3 - 2	
					QC 3 - 28	
					QC 3 - 3	
					QC 3 - 30	
					QC 3 - 34	
					QC 3 - 36	
					QC 3 - 41	
					QC 3 - 51	
					QC 3 - 58	
					QC 3 - 59	
					QC 3 - 68	
					QC 3 - 9	
					QC 3 - 40	
					QC 3 - 19	
					QC 3 - 43	
					QC 3 - 24	
					QC 3 - 61	
					QC 3 - 81	
230	Handfinish - 4-1-Assembly- B4B	1 pcs	11/7/19	0.00 0.74	Handfinish - 4 - 1 - B4B	XL 19-11-11
					Handfinish - 4 - 10 - B4B	
					Handfinish - 4 - 11 - B4B	
					Handfinish - 4 - 12 - B4B	
					Handfinish - 4 - 13 - B4B	
					Handfinish - 4 - 14 - B4B	
					Handfinish - 4 - 15 - B4B	
					Handfinish - 4 - 2 - B4B	
					Handfinish - 4 - 3 - B4B	
					Handfinish - 4 - 4 - B4B	
					Handfinish - 4 - 5 - B4B	
					Handfinish - 4 - 6 - B4B	

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				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
240	QC 5	1 pcs	11/7/19	0.00 0.00	QC 5 - 10
					QC 5 - 12
					QC 5 - 17
					QC 5 - 18
					QC 5 - 19
					QC 5 - 22
					QC 5 - 24
					QC 5 - 3
					QC 5 - 43
					QC 5 - 49
					QC 5 - 51
					QC 5 - 58
					QC 5 - 68
					QC 5 - 9
					QC 5 - 50
					QC 5 - 30
					QC 5 - 40
					QC 5 - 61
					QC 5 - 81
250	Packaging 3-1 - Stock - B4B	1 pcs	11/7/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
255	DC - 1 - B4B	1	11/7/19	0.00 0.00	DC - 1 - B4B

260 QC 21 - FG	pcs	1	11/7/19	0.00 0.00	DC - 2 - B4B	DAS	NOV 13 2019
	pcs				QC 21 - FG - 21	21	
					QC 21 - FG - 70	70	
					QC 21 - SA - 53	53	

Part Op 110 - (Skidtubes) 1-Deburr Fwd edge of tube 3-Weld Fwd Cap as per Dwg D4361. Use aluminum rod. Grind D2647 to fit Descriptions: as required. 5-Cut aft end to length from front of tube 6-Drill pilot holes using drill jig DT8025 & DT8169 A-B-C-D 8-Open Aft cap hole using # 6 drill bit 9-Open holes for Tow Ring to Ø0.625" as per Dwg D4361, D4361-043 Drilling Detail

115 - (QC5- Inspect part completeness to step on W/O)

116 - (QC10- Inspect visual per QSI004- ground welds)

120 - (Chemical Conversion Coat per QSI005 4.1)

130 - (QC7-Inspect Chemical Conversion Coat)

140 - (Skidtubes) 1-Open holes to finished size as per Dwg D4361, D4361-043 Drilling Detail (without cutting fluid) 2- Countersink crossbolt spacer holes as per Dwg D4361 (without cutting fluid) 4-Bond D2654-7 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

150 - (QC5- Inspect part completeness to step on W/O)

160 - (Skidtubes) 1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D4361. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

180 - QC10- Inspect visual per QSI004- ground welds)

190 - (QC5- Inspect part completeness to step on W/O)

200 - (Pressure Wash per QSI005 4.3/ Clean and remove all markings) Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

210 - (White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum) Make sure Nut Plate Thread is protected using paint screw, and mask GHW studs.

220 - (QC3- Inspect Part Finish)

230 - (Assemble as per dwg) 1-Install wearplates as per dwg D4361. 7-Wing Walk as per Dwg D4361-043 and QSI 005 4.4

240 - (QC5- Inspect part completeness to step on W/O)

250 - Identify and pack for shipping as per PPP D206-642-451

255 - (Document Control) Photocopy bluefile and create labels per PPP D206-642-451 CHG001

260 - (QC21- Final Inspection - Work Order Release)

Si Kofler
S200625
exp: 07/25/20

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Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2620	Skidtube, 206 Skidtube	1 pcs (1 ea)	110-Skidtubes - 1	012855
D2647	Cap	1 pcs (1 ea)	110-Skidtubes - 1	S210317
D2654-7	Web	1 pcs (1 ea)	140-Skidtubes - 2 - B4B	S166049
D2649	Cross Bolt Spacer	26 pcs (26 ea)	160-Skidtubes - 3 - B4B	S006447
AN3-36A	Bolt	10 Ea (10 ea)	230-Handfinish - 4-1-Assembly-B4B	S227234
CCR264SS3-3	Cherry Rivet	2 Ea (2 ea)	230-Handfinish - 4-1-Assembly-B4B	S218142
CR3212-4-03	Cherry Rivet	2 Ea (2 ea)	230-Handfinish - 4-1-Assembly-B4B	S099573
D2646	Aft Cap	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S163230-3
D2651-1	Plug	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	S197616
D2651-3	O-Ring	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	S196044
D2680-041	Nut Plate	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S180320
D3873-1	Bushing 5215514(x8)	20 pcs (20 ea)	230-Handfinish - 4-1-Assembly-B4B	S197646
D4366-041	Run-on Landing Wearplate Fwd	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S201725
D4366-043	Run-on Landing Wearplate Aft	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S201680
MS21042-3	Nut use MS21042L3 per QSI 017	10 Ea (10 ea)	230-Handfinish - 4-1-Assembly-B4B	S211533
MS27039-1-08	Screw	2 Ea (2 ea)	230-Handfinish - 4-1-Assembly-B4B	S162897
MS27039-4-06	Screw	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S1669743
NAS1149C0332R	Washer (AN960C10L)	10 Ea (10 ea)	230-Handfinish - 4-1-Assembly-B4B	S215541
NAS1149D0332J	Washer	2 Ea (2 ea)	230-Handfinish - 4-1-Assembly-B4B	S218151
NAS1149D0463J	Washer	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	S178378
				S150582

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Skidtubes - 1	D2620	1	15	0
	D2647	1	20	0
140-Skidtubes - 2 - B4B	D2654-7	1	2	0
160-Skidtubes - 3 - B4B	D2649	26	51	0
230-Handfinish - 4-1-Assembly-B4B	AN3-36A	10	50	0
	CCR264SS3-3	2	35	0
	CR3212-4-03	2	130	0
	D2646	1	41	0
	D2651-1	8	149	0
	D2651-3	8	553	0
	D2680-041	1	17	0
	D3873-1	20	76	0
	D4366-041	1	2	0
	D4366-043	1	2	0
	MS21042-3	10	449	0
	MS27039-1-08	2	172	0
	MS27039-4-06	1	224	0
	NAS1149C0332R	10	3,507	0
	NAS1149D0332J	2	1,554	0
	NAS1149D0463J	1	1,888	0
Part Specifications				
Specifications could not be found.				

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QTY	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
X	X		D4361-041	SKIDTUBE ASSY
			D4361-043	SKIDTUBE ASSY
1	1		D2600-1-160	EXTRUSION
1	1		D2654-5	WEB
1	1		D2654-7	WEB
1	1		D2646	AFT CAP
1	1		D2647	CAP
23	26		D2649	CROSS BOLT SPACER
4	8		D2651-1	PLUG
4	8		D2651-3	O-RING
1	1		D2680-041	NUT PLATE
18	20		D3873-1	BUSHING
1			D4364-041	FWD WEARPLATE ASSY
1			D4364-043	AFT WEARPLATE ASSY
	1		D4366-041	FWD WEARPLATE ASSY
	1		D4366-043	AFT WEARPLATE ASSY
9	10		AN3-36A	BOLT
9	10		NAS1149C0332R	WASHER (OR AN960C10L)
9	10		MS21042-3	NUT
2	2		NAS1149D0332J	WASHER (OR AN960JD10L)
2	2		CR284SS3-3	RIVET
2	2		CR3212-4-03	RIVET
2	2		MS27039-1-08	SCREW
1	1		MS27039-4-06	SCREW
1	1		NAS1149D0463J	WASHER (OR AN960JD416)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2654-5/-7 WEB
-POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D4361-041 = 37.5 LBS
D4361-043 = 44.3 LBS
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG CW D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 201957 MJS
1910-17

RELEASED
R 2011-09-12

A	NEW ISSUE	DESCRIPTION	SC	BY	DATE
REV.					
DESIGN	SC				
DRAWN	SC				
CHECKED	SC				
MFG. APPR.	SC				
APPROVED	SC				
DE APPR.	SC				
DATE	11.05.05				

DART AEROSPACE USA, INC
PORT HADLOCK, WA
DRAWING NO. D4361
REV. A
SHEET 1 OF 4
TITLE 206L/407 SKIDTUBE ASSEMBLIES
SCALE NTS
DATE 11.05.05

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Entered: JK Date: Dec 31/19
NCR No. 19-7798



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

DISPOSITION		DEPARTMENT/PROCESS			
Job: <u>201997</u>	Rework ☒ Scrap ☐ Use-as-is ☐	Skid-tube Machining ☐ Large Fab ☐	Cross tube Small Fab ☐ Finishing ☐	Eng. (Non-AW) Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐	Engineering ☒ Water Jet ☐ Supplier ☐ Quality ☐
Date: <u>19/10/30</u>	Sequence #: <u>120110</u>	QTY Affected: <u>1</u>		MRB (QS1042) <u>INS 12 19/10/30</u>	
Description Work Order Deviation		Disposition			
<u>Dwg calls for $\phi 0.625$ tan ring hole which is too small for tan ring</u>		<u>Drill tan ring hole $\phi 0.640$ 19/10/30</u> <u>Ref. D3274 Rev. G</u>			
Completed By <u>TF</u>		Lead hand / Supervisor <u>TF</u> 19/10/30			
QC / QA Coordinator <u>19.11-29</u>					
Root Cause		FAULT CATEGORY			
Operator ☒ Manufacturing Process ☒ Equipment/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐	Pressure/Forced ☐ Bending ☒ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details:	Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐	Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☒ Finish ☐ Part Lost/Missing ☐ Misread ☐	